

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Apparatus for storing audio and/or video (AV) data which is transmitted in the form of a packet including a program specific information (PSI), the ~~audio and/or video data~~ storing apparatus comprising:

~~a packet parser for extracting that parses a received transport stream (TS) packet to output at least one PSI packet and an AV packet corresponding to the at least one PSI packet, extracts packet identifier information (PID) from the at least one PSI packet, and outputting extracts additional information, corresponding to the extracted packet identifier information PID, from the at least one PSI packet and an audio and/or video packet, wherein the additional information does not include the packet identifier information PID;~~

~~an audio/video AV parser for parsing that parses and outputs the the audio and/or video AV packet using the packet identifier information PID and outputting the audio and/or video packet;~~

~~an audio/video AV producer for inserting that inserts the additional information supplied extracted from at the packet parser into a particular region in the audio and/or video AV packet supplied output from the audio/video AV parser;~~

a storage medium; and

~~a controller for controlling that controls each element the AV producer and the storage medium so such that the additional information is inserted into the audio and/or video AV packet so as to be and the AV packet in which the additional information is inserted is stored in the storage medium as the AV data corresponding to the AV packet and the at least one PSI packet,~~

~~wherein the at least one PSI packet is not stored in the storage medium.~~

2. (currently amended): The ~~audio/video data~~ storing apparatus of claim 1, wherein ~~said the~~ packet parser comprises:

a program association table (PAT) parser ~~for searching that searches the a PAT packet to thereby detect packet identifier information~~ ~~PID~~ of a plurality of tables included in the ~~PAT received TS packet~~ and ~~outputting outputs the a~~ detected result as a plurality of table packets;

a program map table (PMT) parser ~~for detecting that detects an audio and/or video the AV packet using a table packet which is a PMT table and outputting outputs a detected result the AV packet;~~

a plurality of table parsers ~~for outputting that output the additional information off from~~ the plurality of table packets; and

an ~~audio/video AV packet processor for converting that converts the a~~ pattern of the ~~audio and/or video AV packet detected output~~ from the PMT parser and ~~outputting outputs the a~~ converted result.

3. (currently amended): The ~~audio/video data storing~~ apparatus of claim 2, wherein ~~said the~~ plurality of table parsers comprises:

a network information table (NIT) parser ~~for receiving that receives~~ an NIT packet from the PAT parser and ~~outputting outputs~~ an event information table (EIT) packet;

an EIT parser ~~for receiving that receives~~ the EIT packet from the NIT parser and ~~outputting outputs a portion of the~~ additional information;

a service description table (SDT) parser ~~for receiving that receives~~ an SDT packet from the PAT parser and ~~outputting outputs another portion of the~~ additional information; and

a time data table (TDT) parser ~~for receiving that receives~~ a TDT packet from the PAT parser and ~~outputting outputs a remaining portion of the~~ additional information.

4. (currently amended): The ~~audio/video data storing~~ apparatus of claim 2, wherein ~~said audio/video the AV packet processor converts the audio/video AV packet into a packetized elementary stream (PES).~~

5. (currently amended): The ~~audio/video data storing~~ apparatus of claim 1, wherein ~~said audio/video the AV parser further comprises a decryptor for decrypting that decrypts the audio~~

and/or video-AV packet in the case that if the audio and/or video-AV packet supplied output
from the packet parser has been is encrypted.

6. (currently amended): The audio/video data storing-apparatus of claim 1, wherein said
audio/video the AV producer comprises:

 a header detector for detecting that detects a header region in the audio and/or video-AV
 packet from the audio/video-AV parser and outputting outputs the a detected result; and

 an additional information inserter for inserting that inserts the additional information
supplied output from the packet parser into the header region detected in-by the header detector.

7. (currently amended): The audio/video data storing-apparatus of claim 4, wherein said
the particular region is the a header region of the PES.

8. (currently amended): The audio/video data storing-apparatus of claim 4, wherein said
the particular region is a user data region of the PES.

9. (currently amended): The audio/video data storing-apparatus of claim 1, wherein said
the additional information is image feature information comprising a title, a classification code, a
time, content information, energy information and motion information of a user desired program.

10. (currently amended): An apparatus for storing received audio and/or video (AV)
data, the audio and/or video data storing-apparatus comprising:

 an encoder for-converting that converts the received audio and/or video-AV data into an
audio and/or video-AV packet and outputting outputs the converted result AV packet;

 a feature parser for parsing that parses features-a feature of the received audio and/or
video-AV data and outputting output the parsed result a parameter corresponding to the parsed
feature;

 a program information inputter for receiving that receives and outputs user desired
program information input by a user;

an additional information processor ~~for producing~~ that produces additional information based on the program information ~~supplied output~~ from the program information inputter and the ~~parsed result-parameter supplied output~~ from the feature parser, and ~~outputting outputs~~ the produced additional information;

an audio/video AV producer ~~for inserting~~ that inserts the additional information ~~supplied output~~ from the additional information processor into a particular region of the ~~audio and/or video~~ AV packet ~~supplied output~~ from the encoder, wherein the additional information ~~does not include~~ including packet identifier information (PID) contained in a program specific information (PSI) packet which is included in the received video-AV data and corresponds to the video-AV packet;

a storage medium; and

a controller ~~for controlling~~ that controls each element ~~the storage medium to store the video packet in which~~ so that the additional information is inserted into the ~~audio and/or video~~ packet ~~so as to be stored in the storage medium,~~

wherein the PSI packet is not stored in the storage medium.

11. (currently amended): The ~~audio/video data storing~~ apparatus of claim 10, wherein ~~said the~~ encoder converts the ~~audio and/or video~~ AV data into a packetized elementary stream (PES).

12. (currently amended): The ~~audio/video data storing~~ apparatus of claim 11, wherein ~~said the~~ particular region is a header region of the PES.

13. (currently amended): The ~~audio/video data storing~~ apparatus of claim 11, wherein ~~said the~~ particular region is a user data region of the PES.

14. (currently amended): The ~~audio/video data storing~~ apparatus of claim 11, wherein ~~said the~~ additional information ~~is image feature~~ comprises the user desired program information comprising a title, a classification code, a time and a time of the user desired program, and

corresponding to content information, energy information and motion information of a user desired program the received AV data.

15. (currently amended): An apparatus for searching audio and/or video (AV) data having the a form of an audio and/or video AV packet, including additional information of a user desired program, the audio/video data searching apparatus comprising:

an input portion for receiving that receives and outputs an audio and/or video the AV packet including the additional information;

a syntax parser an additional information classifier for parsing that parses the audio and/or video AV packet supplied output from the input portion, and extracting and outputting extracts and outputs the additional information, of inserted in a packetized elementary stream (PES) header or a user date region of the AV packet, and then outputting the audio and/or video outputs the AV packet excepting for from which the additional information is extracted;

an additional information parser that comparing compares the additional information received output from the additional information classifier syntax parser with user search information, and outputting outputs a parsed result when the user search information is coincident with the additional information;

an audio/video AV decoder for decoding an audio and/or video that decodes the AV packet supplied output from the additional information classifier syntax parser according to the parsed result supplied output from the additional information parser; and

an output portion for outputting that outputs a decoded result supplied output from the audio/video AV decoder and the additional information, thereby searching the AV data,

wherein the additional information is information which has been outputted from a packet parser of an audio and/or video data storing apparatus and inserted into the audio and/or video packet;

wherein the packet parser has extracted packet identifier information from a program specific information (PSI) which is included in the audio and/or video data and corresponds to the audio and/or video packet, and outputted the additional information corresponding to the extracted packet identifier information and the audio and/or video packet, and

wherein the additional information does not include the packet identifier information

wherein the additional information is extracted from at least one program specific information (PSI) packet using packet identifier information (PID) of the at least one PSI packet,
wherein the additional information does not include the PID of the at least one PSI packet,
and
wherein the at least one PSI packet include information of the AV data, and is not used in searching the AV data.

16. (currently amended): The ~~audio/video data searching~~ apparatus of claim 15, wherein ~~said the~~ additional information is ~~image feature~~ ~~comprises the user desired program~~ information comprising a title, a classification code, ~~a time~~ and a time of ~~the user desired program~~, ~~and corresponding to~~ content information, energy information and motion information of ~~a user desired program~~ ~~the received video data~~.

17. (new): The apparatus of claim 1, wherein the additional information includes information included in the at least one PSI packet, and the additional information is smaller than the at least one PSI packet in size.

18. (new): The apparatus of claim 15, wherein the additional information includes information included in the at least one PSI packet, and the additional information is smaller than the at least one PSI packet in size.